

AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method for producing a porous film according to claim 4, comprising the steps of casting a polymer solution comprising a polymer onto a substrate to form a film; and subjecting the film to phase conversion to thereby form a porous film, wherein the polymer constituting the porous film has a surface tension  $S_a$  [mN/m], wherein the substrate has a surface tension  $S_b$  [mN/m], and wherein  $S_a$  and  $S_b$  satisfy the following condition:  $S_a - S_b \geq -10$ .

2. (Withdrawn) The method for producing a porous film according to claim 1, further comprising the steps of casting a solution mixture as the polymer solution onto the substrate to form a film, and subjecting the film to phase conversion by bringing the film to a solidifying liquid to thereby form a porous film, the solution mixture comprising 8 to 25 percent by weight of a polymer component for constituting the porous film, 10 to 50 percent by weight of a water-soluble polymer, 0 to 10 percent by weight of water and 30 to 82 percent by weight of a water-soluble polar solvent.

3. (Withdrawn) The method for producing a porous film according to one of claims 1 and 2, further comprising the steps of holding the cast film in an atmosphere at a relative humidity of 70% to 100% and a temperature of 15°C to 90°C for 0.2 to 15 minutes, and bringing the film to a solidifying liquid comprising a nonsolvent for the polymer component.

4. (Currently Amended) A porous film having a number of continuous micropores, wherein the film has a thickness of 5 to 200  $\mu\text{m}$ , has an average surface pore size  $A$  of [[0.7]] 0.1 to 10  $\mu\text{m}$  and an average surface porosity  $C$  of ~~from 50% to 80%~~ and has an average inside pore size  $B$  and an average inside porosity  $D$ ,

wherein the ratio  $A/B$  of  $A$  to  $B$  is in the range of 0.3 to 3,

wherein a maximum surface pore size is 15  $\mu\text{m}$  or less; the ratio  $A^1/A^2$  of an average pore size at one surface  $A^1$  to an average pore size at the other surface  $A^2$  is from 0.6 to 1.5, ~~a maximum inside pore size is 5.1  $\mu\text{m}$  or less~~; the average surface porosity  $C$  has an average porosity  $C^1$  of ~~from 50% to 80%~~ 48% or more at one surface and an average porosity  $C^2$  of ~~from 50% to 80%~~ 48% or more at the other surface; the average inside porosity  $D$  is from 45% to

80%; and the ratio C/D of C to D is in the range of 0.7 to 1.5, ~~and the ratio C<sup>1</sup>/C<sup>2</sup> of C<sup>1</sup> to C<sup>2</sup> is in the range of 0.7 to 1.5,~~

wherein a polymer component forming the film comprises at least one selected from a group of amide-imide polymers, imide polymers, polyethersulfones, polysulfones, acrylic polymers or cellulose acetate,

wherein a Gurley permeability of the porous film is from 0.2 to 29 seconds per 100 cc, and

wherein the porous film is produced in a method comprising the steps of casting a polymer solution comprising a polymer onto a substrate to form a film; and subjecting the film to phase conversion to thereby form a porous film, wherein the polymer constituting the porous film has a surface tension Sa [mN/m], wherein the substrate has a surface tension Sb [mN/m], and wherein Sa and Sb satisfy the following condition: Sa-Sb $\geq$ 10.

**5. (Currently Amended)** A porous film having a number of continuous micropores, wherein the film has a thickness of 5 to 200  $\mu\text{m}$ , has an average pore size A<sup>1</sup> of  $[[0.7]]$  0.1 to 10  $\mu\text{m}$  at one surface, an average pore size A<sup>2</sup> of  $[[0.7]]$  0.1 to 10  $\mu\text{m}$  at the other surface, an average porosity C<sup>1</sup> of ~~from 50% to 80%~~ 48% or more at one surface, and an average porosity C<sup>2</sup> of ~~from 50% to 80%~~ 48% or more at the other surface,

wherein the ratio A<sup>1</sup>/A<sup>2</sup> of A<sup>1</sup> to A<sup>2</sup> is in the range of 0.6 to 1.5,

wherein the ratio C<sup>1</sup>/C<sup>2</sup> of C<sup>1</sup> to C<sup>2</sup> is in the range of 0.7 to 1.5,

wherein a maximum surface pore size is 15  $\mu\text{m}$  or less; ~~a maximum inside pore size is 5.1  $\mu\text{m}$  or less;~~ the average inside porosity D is from 45% to 80%; the ratio C/D of C to D is in the range of 0.7 to 1.5, ~~and the ratio C<sup>1</sup>/C<sup>2</sup> of C<sup>1</sup> to C<sup>2</sup> is in the range of 0.7 to 1.5,~~

wherein a polymer component forming the film comprises at least one selected from a group of amide-imide polymers, imide polymers, polyethersulfones, polysulfones, acrylic polymers or cellulose acetate,

wherein a Gurley permeability of the porous film is from 0.2 to 29 seconds per 100 cc, and

wherein the porous film is produced in a method comprising the steps of casting a polymer solution comprising a polymer onto a substrate to form a film; and subjecting the film to phase conversion to thereby form a porous film, wherein the polymer constituting the porous

film has a surface tension  $S_a$  [mN/m], wherein the substrate has a surface tension  $S_b$  [mN/m], and wherein  $S_a$  and  $S_b$  satisfy the following condition:  $S_a - S_b \geq -10$ .

6. (Previously presented) The porous film according to claim 4, wherein the Gurley permeability of the porous film is from 1 to 25 seconds per 100 cc.

7. (Previously presented) The porous film according to claim 4, wherein the Gurley permeability of the porous film is from 1 to 18 seconds per 100 cc.

8. (Previously presented) The porous film according to claim 5, wherein the Gurley permeability of the porous film is from 1 to 25 seconds per 100 cc.

9. (Previously presented) The porous film according to claim 5, wherein the Gurley permeability of the porous film is from 1 to 18 seconds per 100 cc.

10-19. (Cancelled).

20. (New) The porous film according to claim 4, wherein the film has an average porosity  $C^1$  of from 60% to 80% at one surface and an average porosity  $C^2$  of from 60% to 80% at the other surface.

21. (New) The porous film according to claim 5, wherein the film has an average porosity  $C^1$  of from 60% to 80% at one surface, and an average porosity  $C^2$  of from 60% to 80% at the other surface.